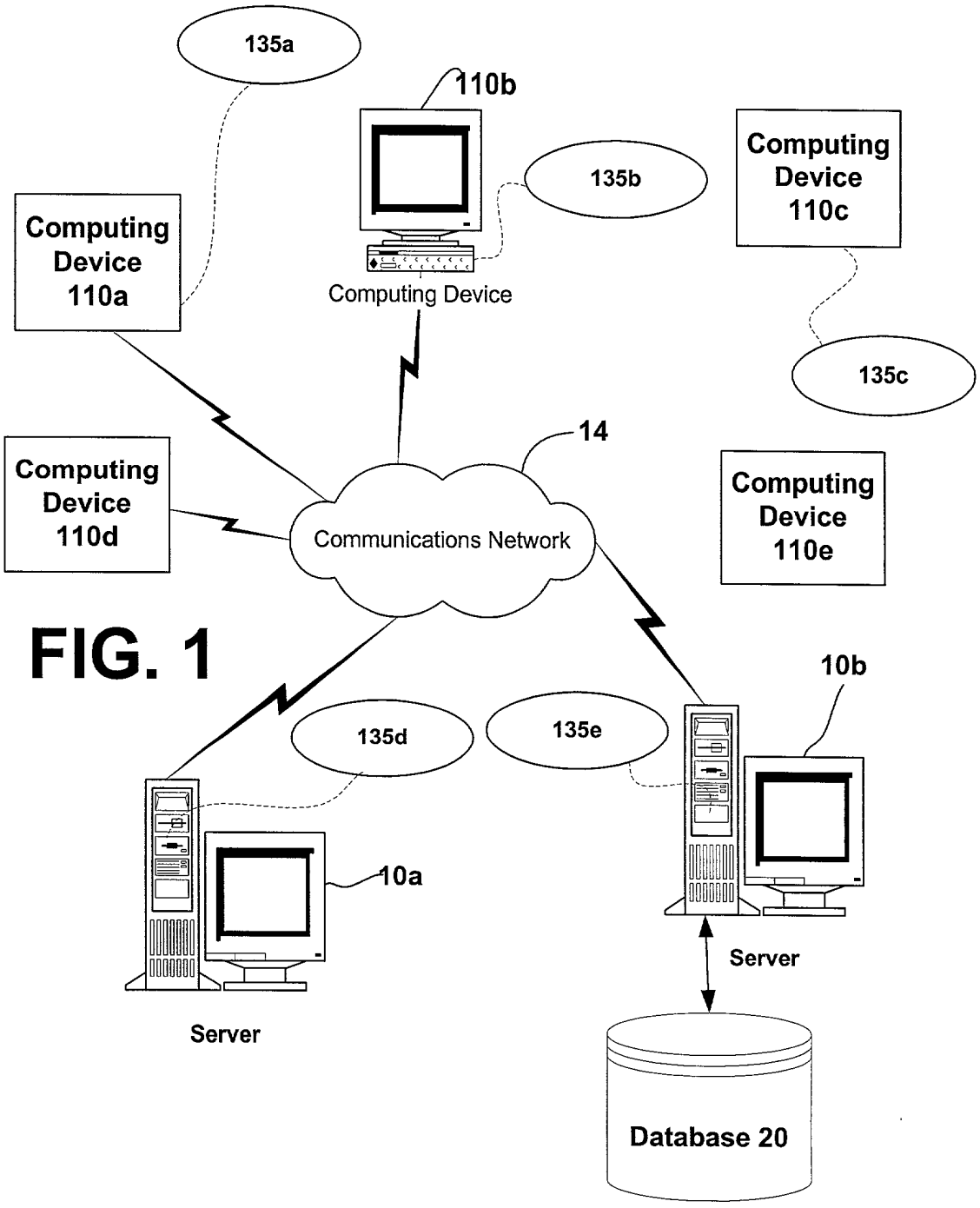
135a
110b
135b
Computing Device 110c
Computing Device 110a
Computing Device
135c
14
Computing Device 110d
Communications Network
Computing Device 110e
10b
135d
135e
10a
Server
Server
Database 20

FIG. 1

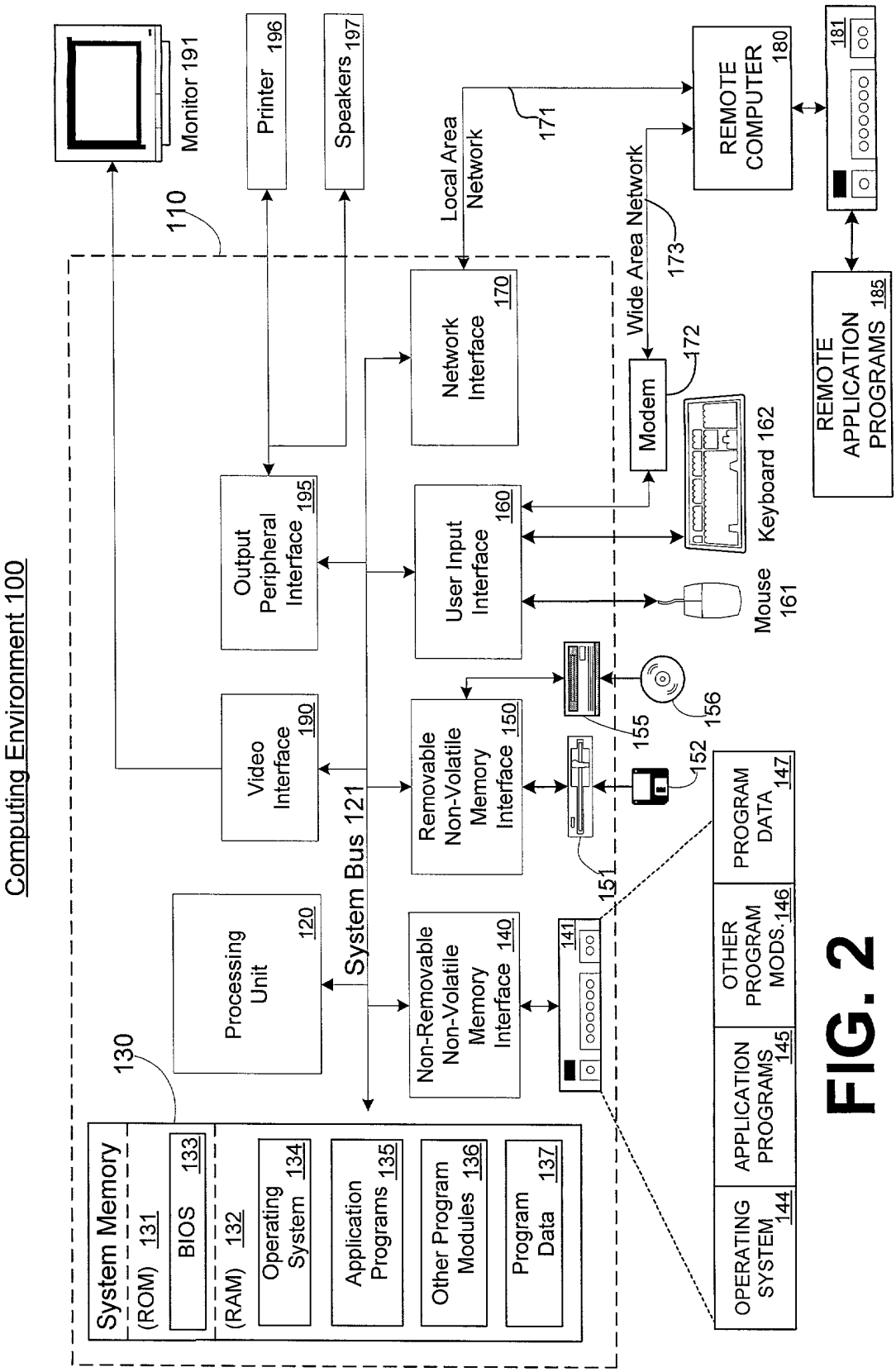
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FIG. 2

FIG. 3A

300

```
using System;
namespace FirstParty.Component {
        public class A {
                public virtual void F() {
                        Console.WriteLine("A.F()");
                }
        }
}
```

FIG. 3B

302

```
using System;
using FirstParty.Component;
namespace SecondParty.Application {
        class B: A {
                public void F(long count) {
                        for (int i = 0; i < count; i++)
                                Console.WriteLine("B.F(int)");
                }
                public void G() {
                        Console.WriteLine("B.G()");
                }
                static void Main() {
                        B b = new B();
                        b.F();
                        b.F(1);
                        b.G();
                }
        }
}
```

400

```
using System;
namespace FirstParty.Component {
        public class A {
        }
}
```

402a

FIG. 4A

410

```
using System;
using FirstParty.Component;
namespace SecondParty.Application {
        class B: A {
                public void G() {
                        Console.WriteLine("B.G");
                }
                static void Main() {
                        B b = new B();
                        b.G();
                }
        }
}
```

412

414a

FIG. 4B

420

```
// version 2
using System;
namespace FirstParty.Component {
        public class A {
                public virtual void G() {
                        Console.WriteLine("A.G");
                }
        }
}
```

402b

414b

FIG. 4C

430

```
// version 2
using System;
using FirstParty.Component;
namespace SecondParty.Application {
        class B: A {                                    414b
                new public void G() {
432             Console.WriteLine("B.G");
                }
                static void Main() {
                        B b = new B();
                        b.G();
                }
        }
}
```

FIG. 4D

440

```
using System;
using FirstParty.Component;
namespace SecondParty.Application {
        class B: A {                                    414b
                override public void G() {
442             Console.WriteLine("B.G");
                }
                static void Main() {
                        B b = new B();
                        b.G();
                }
        }
}
```

FIG. 4E

500

```
using System;
class Test {
	static void F() {
		Console.WriteLine("Test.F");
	}
	static void F(int i) {
		Console.WriteLine("Test.F(int)");
	}
	static void Main() {
		F();
		F(3);
	}
}
```

FIG. 5A

FIG. 5B

```
Test.F
Test.F(int)
```

502

510

```
using System;
class A {
	public void F() {
		Console.WriteLine("Test.F");
	}
}
class B: A {
	public void F(int i) {
		Console.WriteLine("Test.F(int)");
	}
}
class Test {
	static void Main() {
		int i = 3;
		B b = new B();
		b.F();
		b.F(i);
	}
}
```

FIG. 5C

FIG. 5D

520

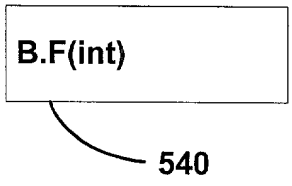
```
using System;
namespace FirstParty.Component {
        public class A {
        }
}
```

FIG. 5E

530

```
using System;
using FirstParty.Component;
namespace SecondParty.Application {
        class B: A {
                public void F(long count) {
                        for (int i = 0; i < count; i++)
                                Console.WriteLine("B.F(int)");
                }
                static void Main() {
                        int i = 3;
                        B b = new B();
                        b.F(i);
                }
        }
}
```

FIG. 5F



600

```
class Base
{
        public void F() {}
}
class Derived: Base
{
        public void F() {}              // Warning,
hiding an inherited name
}
```

FIG. 6A

610

```
class Base
{
        public void F() {}
}
class Derived: Base
{
        new public void F() {}
}
```

FIG. 6B

FIG. 6C

620

```
class Base
{
        public static void F() {}
}
class Derived: Base
{
        new private static void F() {}        // Hides Base.F in Derived only
}
class MoreDerived: Derived
{
        static void G() { F(); }                    // Invokes Base.F
}
```

FIG. 7

700

```
interface ITest
{
        void F();                          // F()
        void F(int x);                     // F(int)
        void F(ref int x);                 // F(ref int)
        void F(out int x);                 // F(out int)
        void F(int x, int y);              // F(int, int)
        int F(string s);                   // F(string)
        int F(int x);                      // F(int)
        void F(string[] a);                // F(string[])
        void F(params string[] a);         // F(string[])
}
```

800

```
class A
{
        public void F() {
Console.WriteLine("A.F"); }
        public virtual void G() {
Console.WriteLine("A.G"); }
}
class B: A
{
        new public void F() {
Console.WriteLine("B.F"); }
        public override void G() {
Console.WriteLine("B.G"); }
}
class Test
{
        static void Main() {
                B b = new B();
                A a = b;
                a.F();
                b.F();
                a.G();
                b.G();
        }
}
```

FIG. 8A

810

```
A.F
B.F
B.G
B.G
```

FIG. 8B

```
class A
{
        public virtual void F() {
Console.WriteLine("A.F"); }
}
class B: A
{
        public override void F() {
Console.WriteLine("B.F"); }
}
class C: B
{
        new public virtual void F() {
Console.WriteLine("C.F"); }
}
class D: C
{
        public override void F() {
Console.WriteLine("D.F"); }
}
class Test
{
        static void Main() {
                D d = new D();
                A a = d;
                B b = d;
                C c = d;
                a.F();
                b.F();
                c.F();
                d.F();
        }
}
```

820

FIG. 8C

```
B.F
B.F
D.F
D.F
```

830

FIG. 8D

```
class A
{
        int x;
        public virtual void PrintFields() {
                Console.WriteLine("x = {0}", x);
        }
}
class B: A
{
        int y;
        public override void PrintFields() {
                base.PrintFields();
                Console.WriteLine("y = {0}", y);
        }
}
```

900

FIG. 9A

```
class A
{
        public virtual void F() {}
}
class B: A
{
        public virtual void F() {}                //
Warning, hiding inherited F()
}
```

910

FIG. 9B

```
class A
{
        public virtual void F() {}
}
class B: A
{
        new private void F() {}        // Hides A.F within B
}
class C: B
{
        public override void F() {}   // Ok, overrides A.F
}
```

920

FIG. 9C